

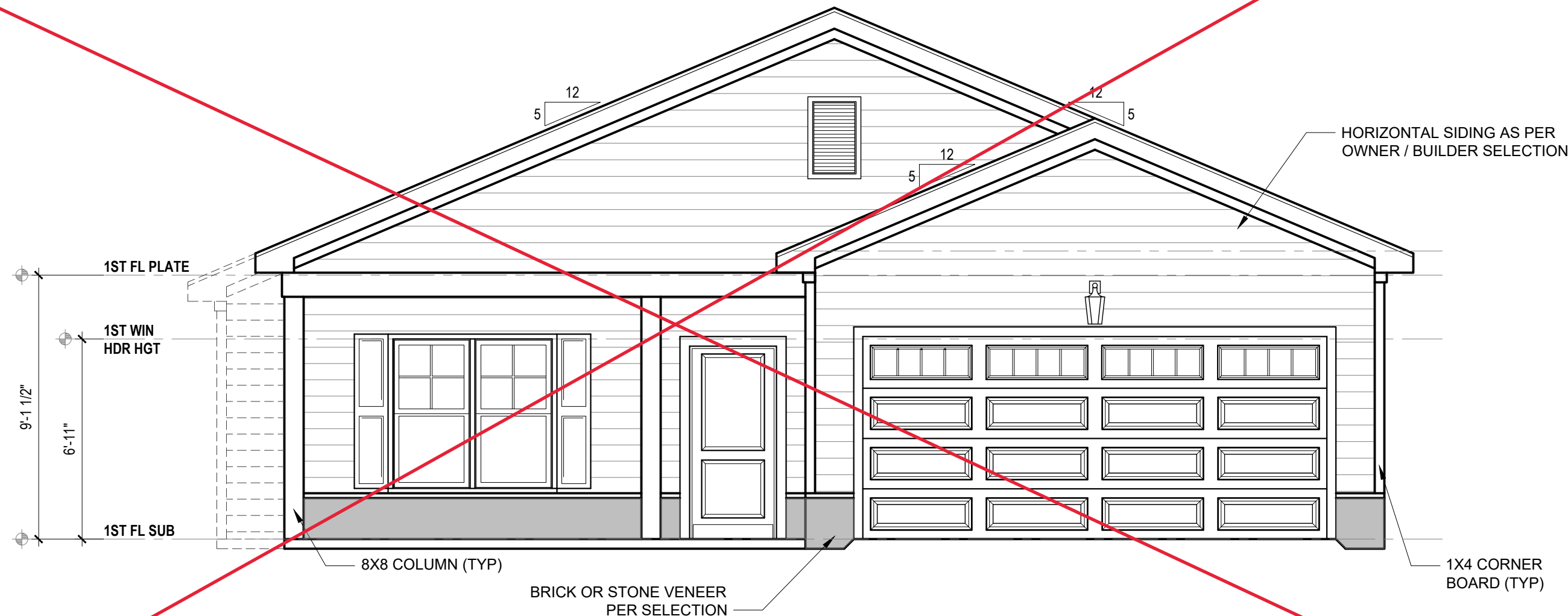
THE HAVILLAND

HNL-000-044



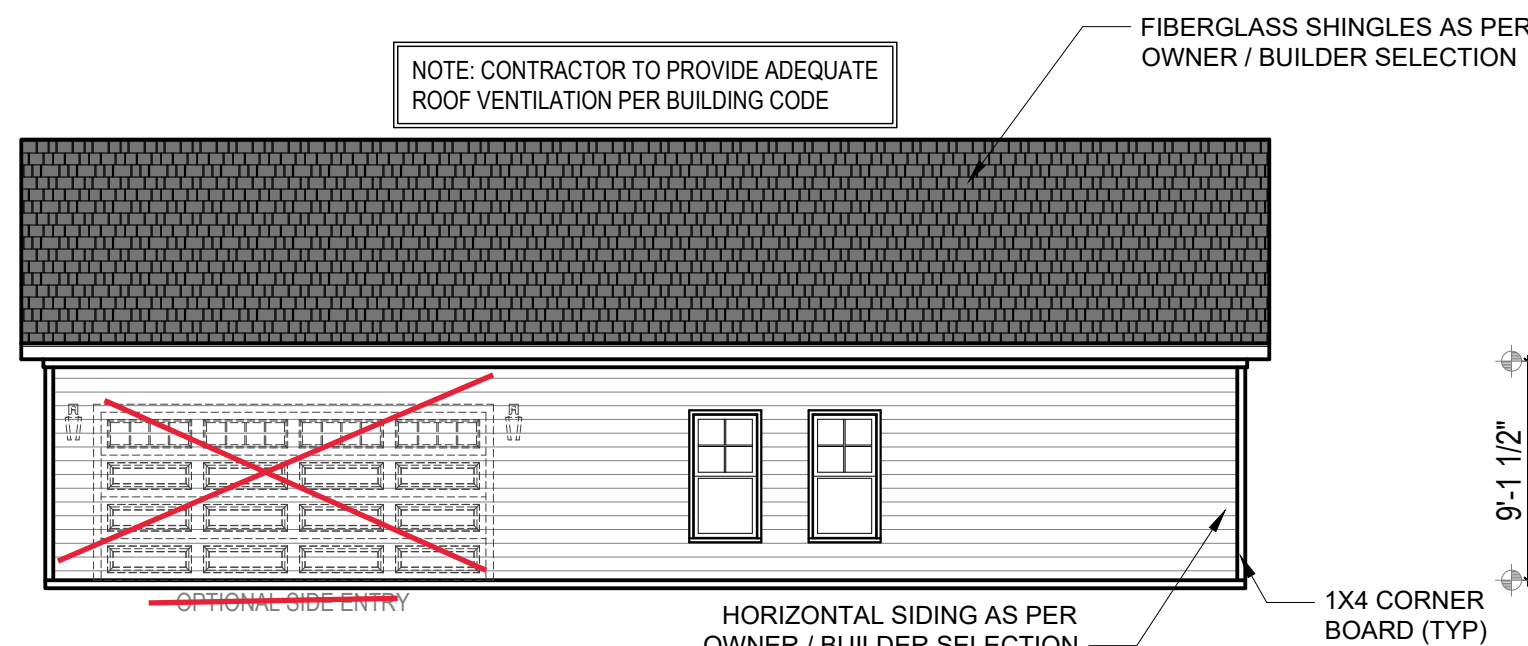
FRONT ELEVATION A

1/4" = 1'-0"



**FRONT ELEVATION A
W/ OPTIONAL VENEER**

1/4" = 1'-0"



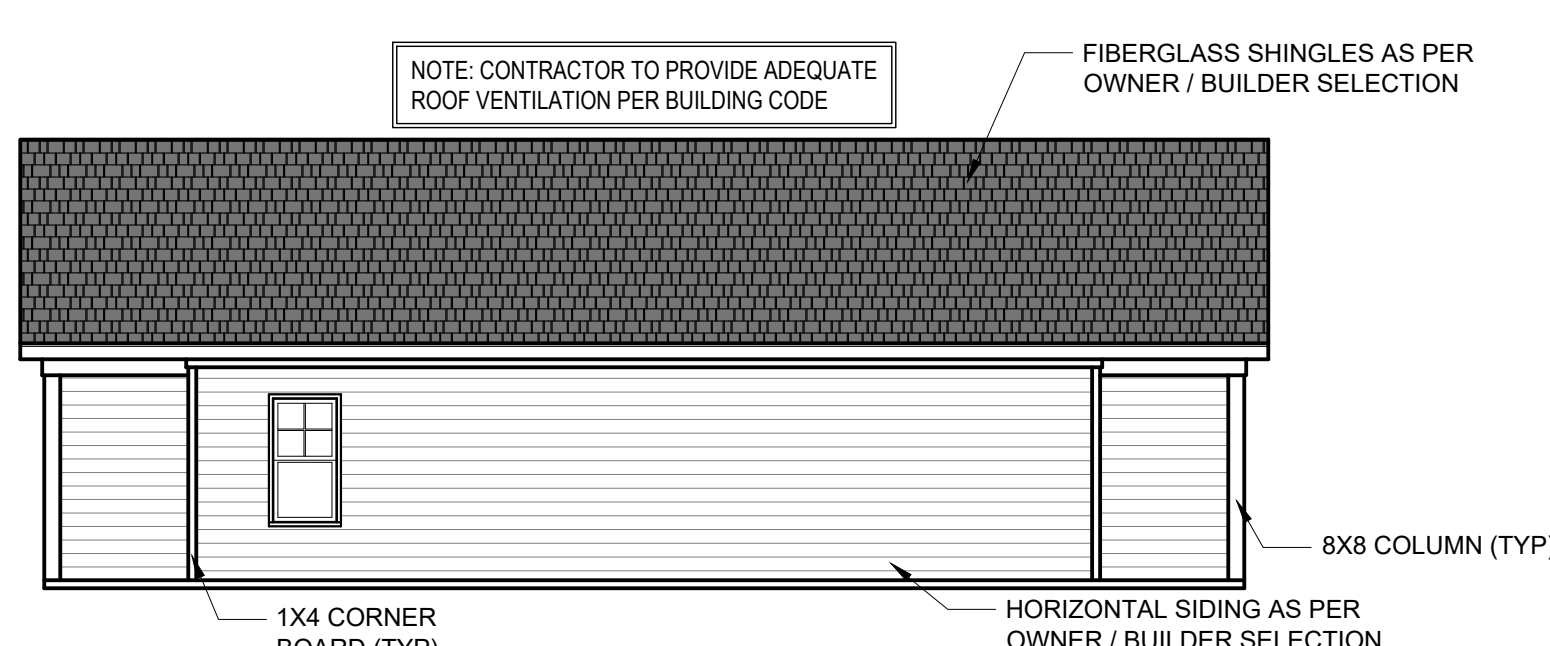
RIGHT ELEVATION A

1/8" = 1'-0"



REAR ELEVATION A

1/8" = 1'-0"



LEFT ELEVATION A

1/8" = 1'-0"

2x4 WALLS; 2X4
GARAGE WALLS &
2X6 PLUMBING
WALLS AS NEEDED. 9'
CEILINGS

1. DRB DESIGN assumes no liability for any home constructed from this plan.
2. All construction shall conform to the latest requirements of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
3. Should these plans require structural calculations for permitting the contractor shall be required to obtain the services of a structural engineer after notifying DRB DESIGN that such services are required.
4. Release of these plans requires further cooperation among the owner, his/her contractor, and DRB DESIGN.
5. Design and construction are complex and, although the designer performed his services with due care and diligence, perfection is not a guarantee.
6. Communication is imperfect and every contingency cannot be anticipated.
7. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to DRB DESIGN. Failure to notify the DRB DESIGN compounds misunderstandings and increases construction costs.
8. A failure to cooperate by a simple notice to DRB DESIGN shall relieve the designer from any and all responsibilities for all consequences.
9. Changes made to these plans without the consent of the designer are unauthorized and shall relieve DRB DESIGN of responsibility for any and all consequences arising out of such changes.
10. Written dimensions on these plans always have precedence over scaled dimensions.
11. It is the contractors responsibility to verify and be responsible for all dimensions and square footage prior to construction, as well as conditions on the job site. DRB DESIGN is not responsible for dimension and square footage errors once construction has begun.
12. DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.

PROJECT #
DRB2301-0091_C
DATE
01/19/2024
DRAWN/DESIGNED BY
NW
CHECKED BY
DRB
SCALE
1/4" = 1'-0"

WEBSITE
www.
drbhomedesign
.com

PROJECT NAME
THE
HAVILLAND

drbdesign@drbhomedesign.com 919.631.5979
250 Shipwash Dr Suite 105 Garner, NC 27529

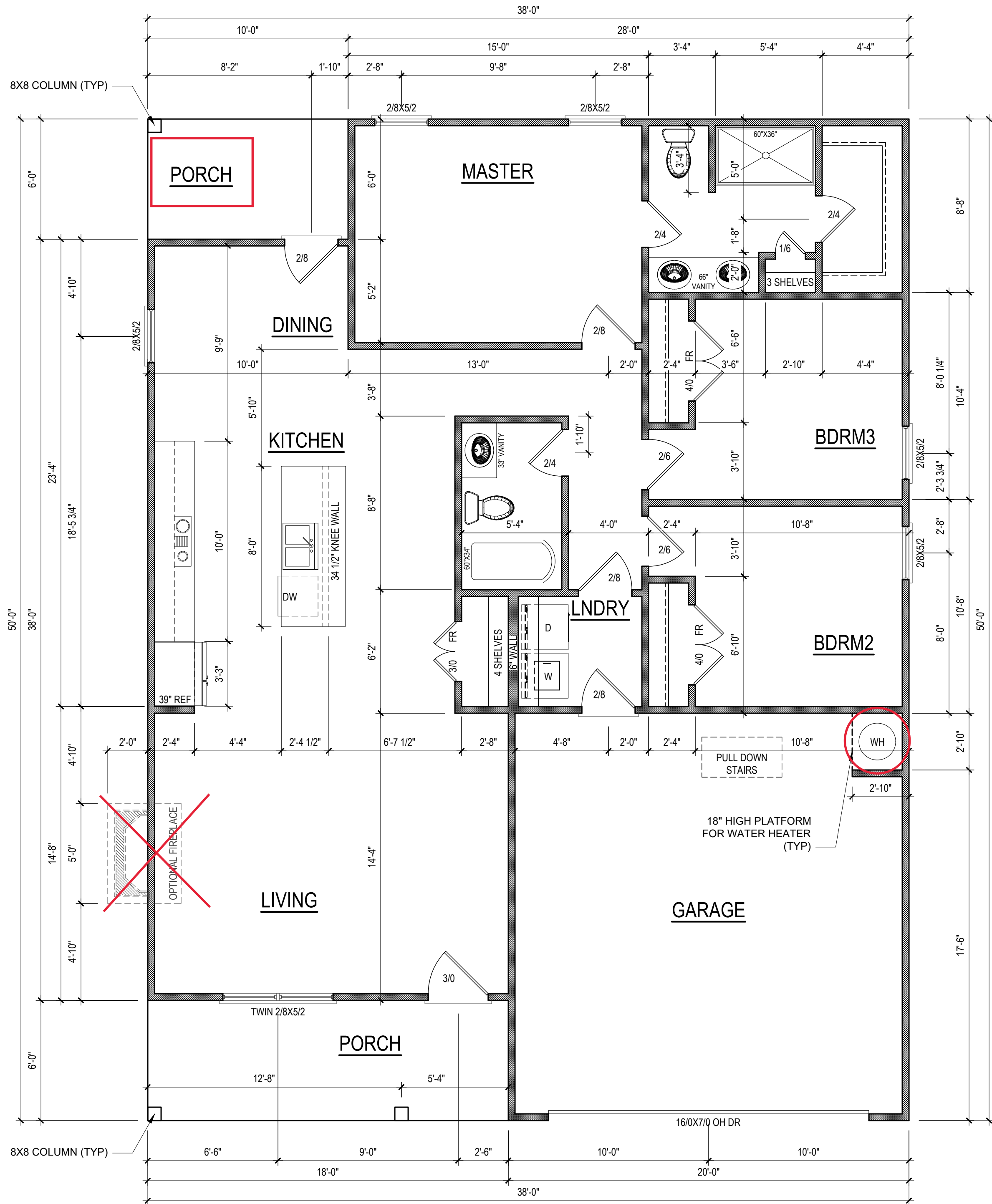
CLIENT NAME
A&G Residential
916 Arsenal Ave. Suite B.
Fayetteville, NC 28305
jenn@agresidentialinc.com
(910) 237-7944

SHEET NAME
ELEVATIONS
SHEET #

1

of 10

- DRB DESIGN assumes no liability for any home constructed from this plan.
- All construction shall conform to the latest requirements of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
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FIRST FLOOR PLAN
1/4" = 1'-0" CEILING HGT. = 9'-0"

NOTE: VERIFY WINDOW SILL HEIGHT CLEARANCE ABOVE TUBS AND COUNTERTOPS TO ALLOW FOR TRIM AND/OR BACKSPLASH

2x4 WALLS; 2X4
GARAGE WALLS &
2X6 PLUMBING
WALLS AS NEEDED. 9'
CEILINGS

HEATED SQUARE FOOTAGE	
First Floor	1330
TOTAL HEATED	1330
UNHTD SQUARE FOOTAGE	
Garage	402
Front Porch	108
Rear Porch	60
TOTAL UNHEATED	570
TOTAL SQ FT	1900

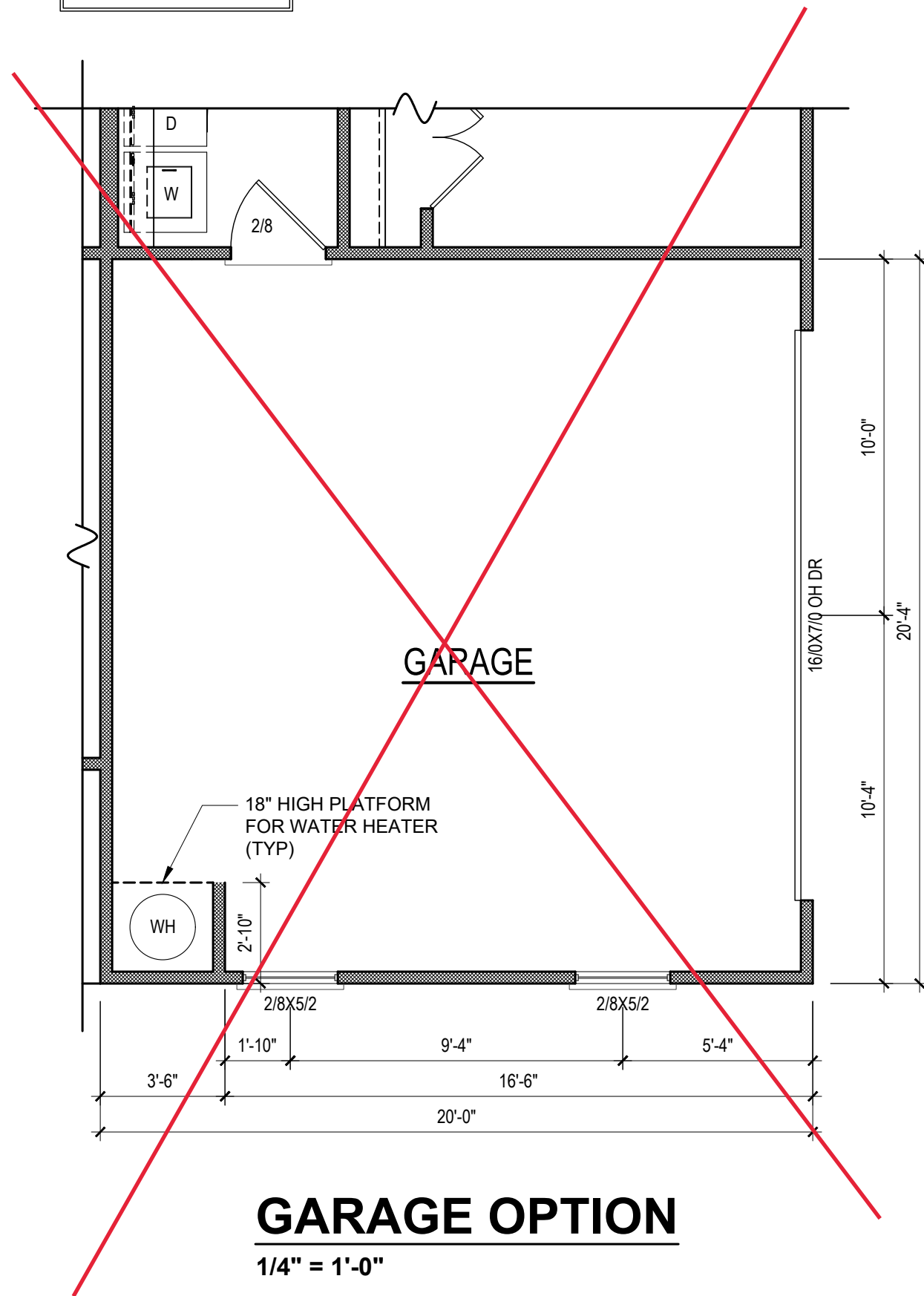
NOTE:
SEE ELEVATIONS FOR
WINDOW HDR HGTS

NOTE:
ALL DOORS ARE 6'-8"
TALL UNO

NOTE:
ALL EXTERIOR WALLS
ARE NOMINAL 4" UNO

NOTE:
ALL INTERIOR WALLS
ARE NOMINAL 4" UNO

NOTE:
ALL DIMENSIONS ARE
FRAME TO FRAME



GARAGE OPTION
1/4" = 1'-0"

PROJECT #
DRB2301-0091_C
DATE
01/19/2024
DRAWN/DESIGNED BY
NW
CHECKED BY
DRB
SCALE
1/4" = 1'-0"

WEBSITE
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drbhomedesign
.com

PROJECT NAME
THE
HAVILLAND

drbdesign@drbhomedesign.com 919.631.5979
250 Shipwash Dr Suite 105 Garner, NC 27529

CLIENT NAME
A&G Residential
916 Arsenal Ave. Suite B.
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jenn@agresidentialnc.com
(910) 237-7944

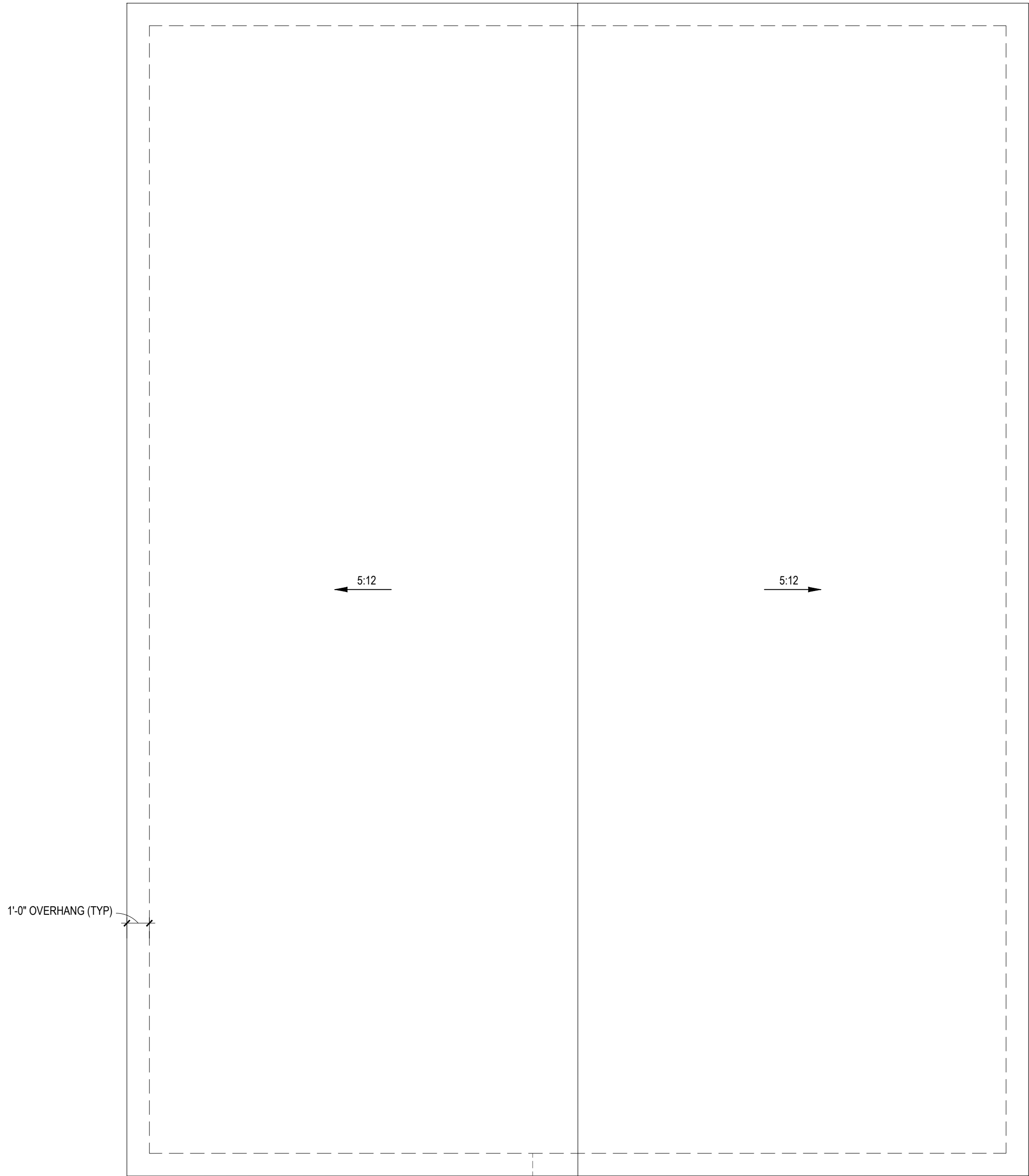
SHEET NAME
1ST_FLOOR

SHEET #

8

of 10

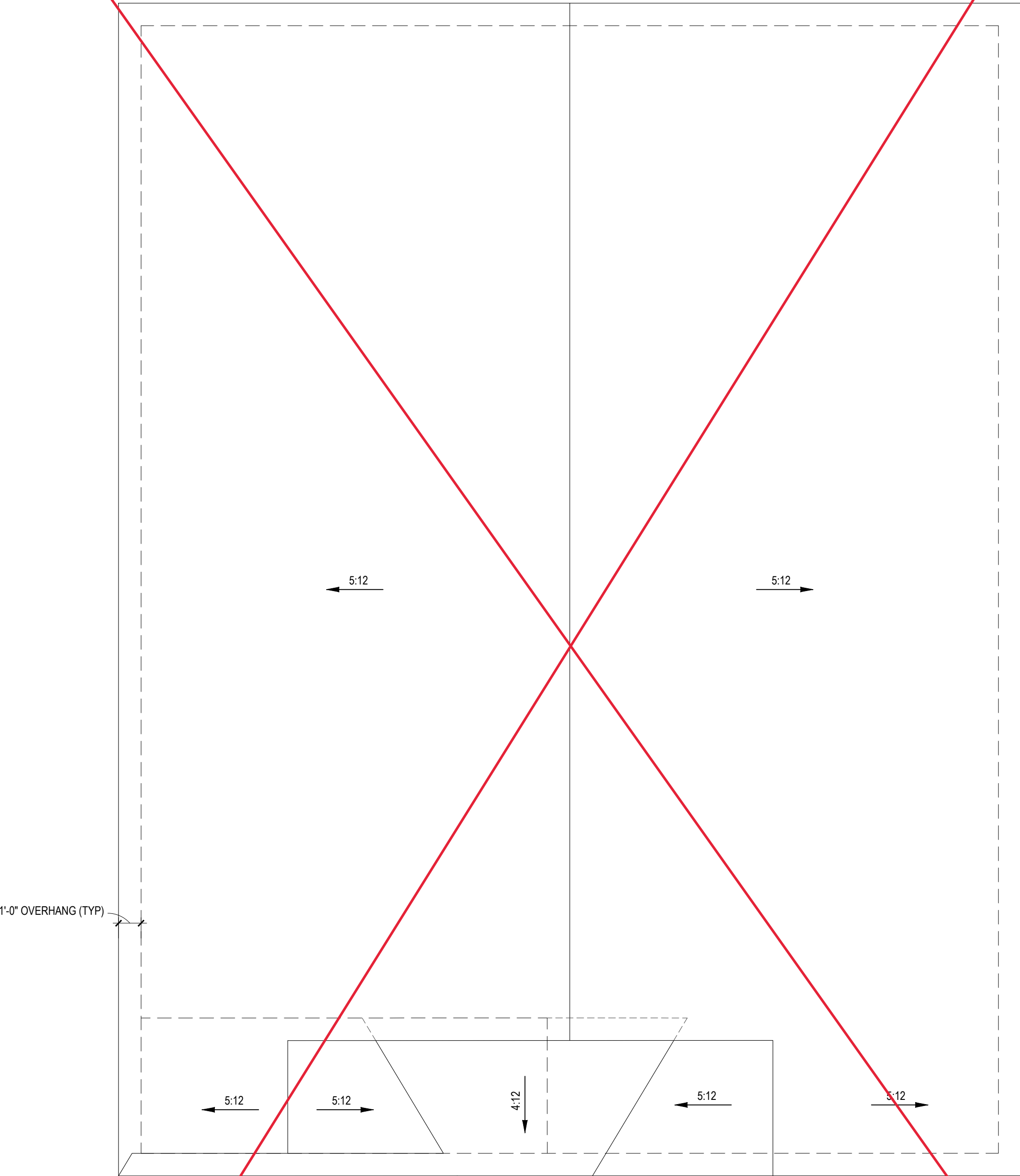
2x4 WALLS; 2X4 GARAGE WALLS & 2X6
PLUMBING WALLS AS NEEDED. 9'
CEILINGS



NOTE: SEE STRUCTURAL PLANS FOR
ATTIC VENTILATION CALCULATIONS

NOTE: ANY ROOF PITCH 4:12 OR LESS SHALL BE
PROPERLY WATERPROOFED PER BLDG. CODE

ROOF PLAN - ELEVS A,B
1/4" = 1'-0"

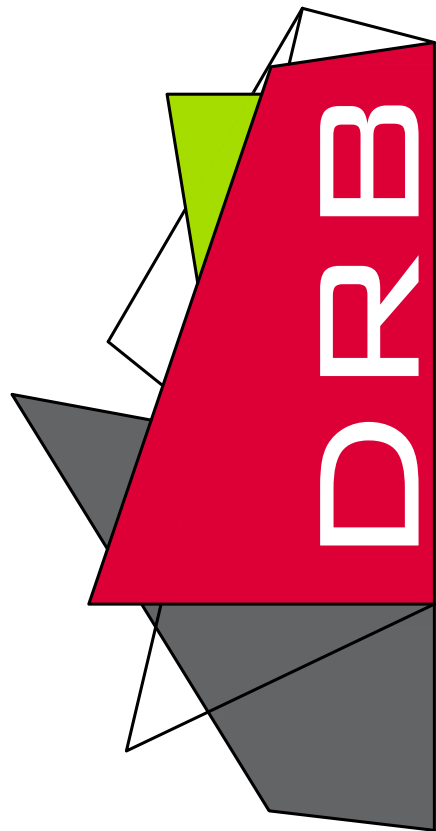


NOTE: SEE STRUCTURAL PLANS FOR
ATTIC VENTILATION CALCULATIONS

NOTE: ANY ROOF PITCH 4:12 OR LESS SHALL BE
PROPERLY WATERPROOFED PER BLDG. CODE

ROOF PLAN - ELEVS C,D
1/4" = 1'-0"

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11. DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.
- 12.



drbdesign@drbhomedesign.com 919.631.5979
250 Shipwash Dr Suite 105 Garner, NC 27529

CUSTOMER NAME

A&G Residential
916 Arsenal Ave. Suite B.
Fayetteville, NC 28305
jenn@agresidentialinc.com
(910) 237-7944

SHEET NAME

ROOF

SHEET #

9

of 10

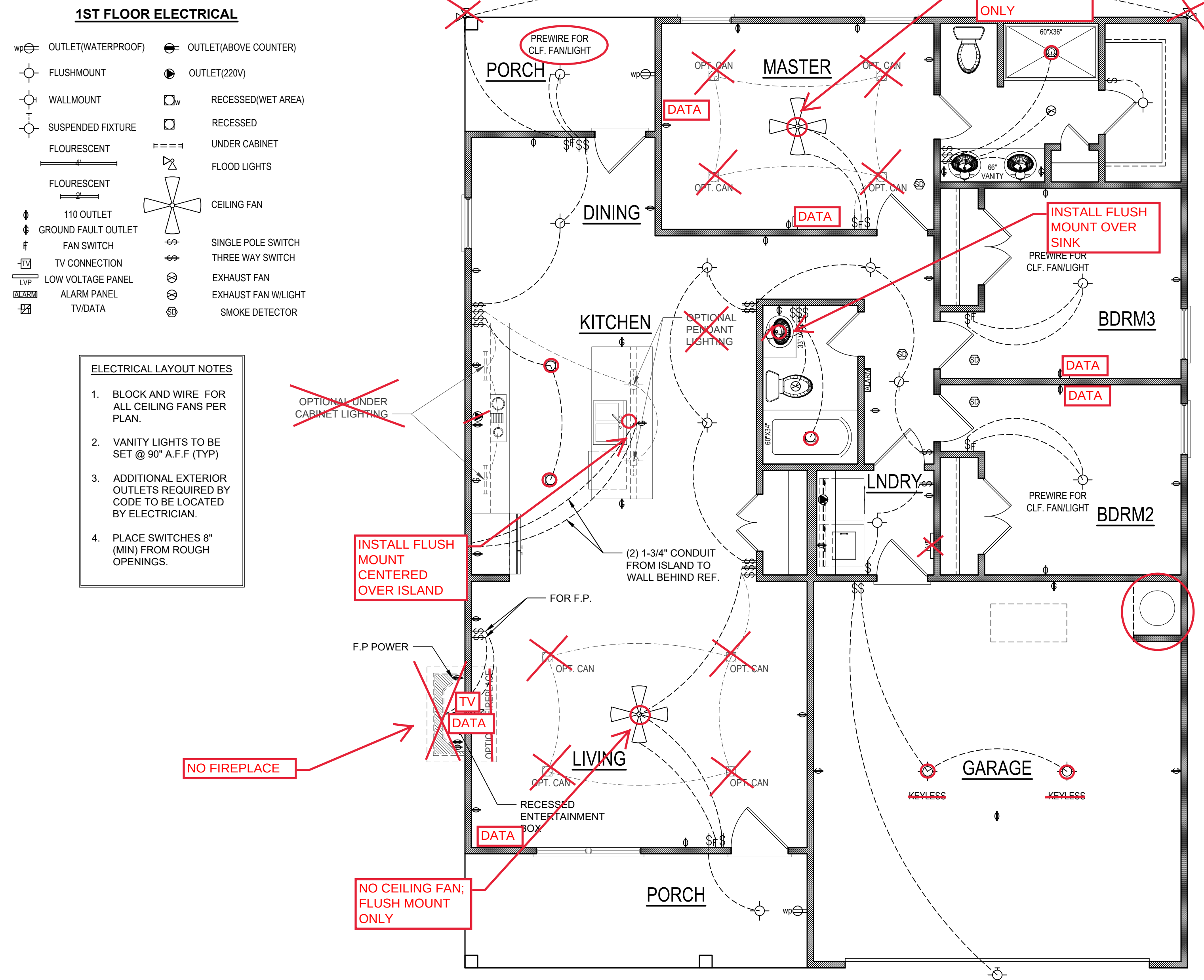
WEBSITE

www.
drbhomedesign
.com

PROJECT NAME

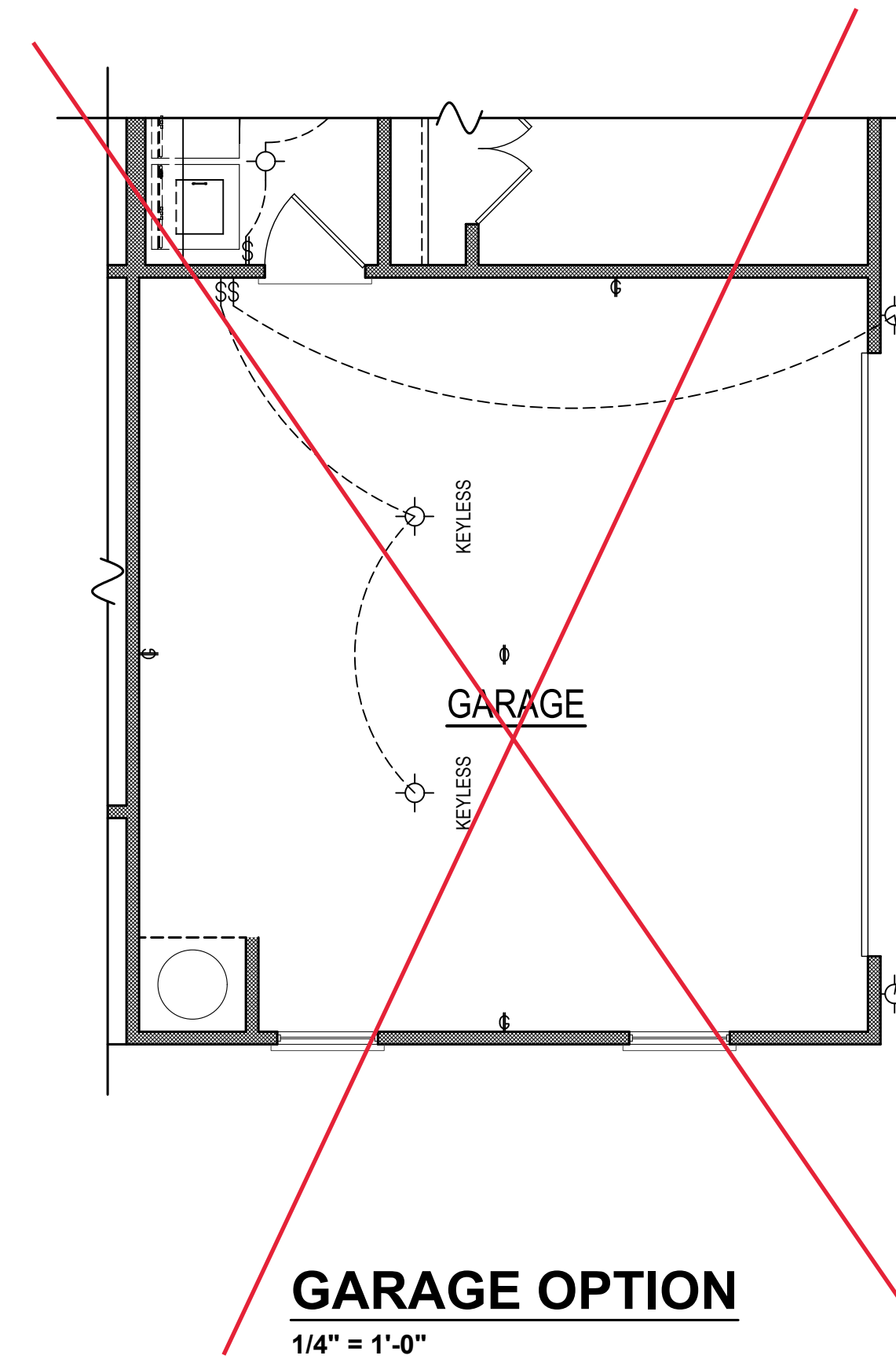
THE
HAVILLAND

PROJECT #
DRB2301-0091_C
DATE
01/19/2024
DRAWN/DESIGNED BY
NW
CHECKED BY
DRB
SCALE
1/4" = 1'-0"



FIRST FLOOR PLAN

1/4" = 1'-0" CEILING HGT. = 9'-0"



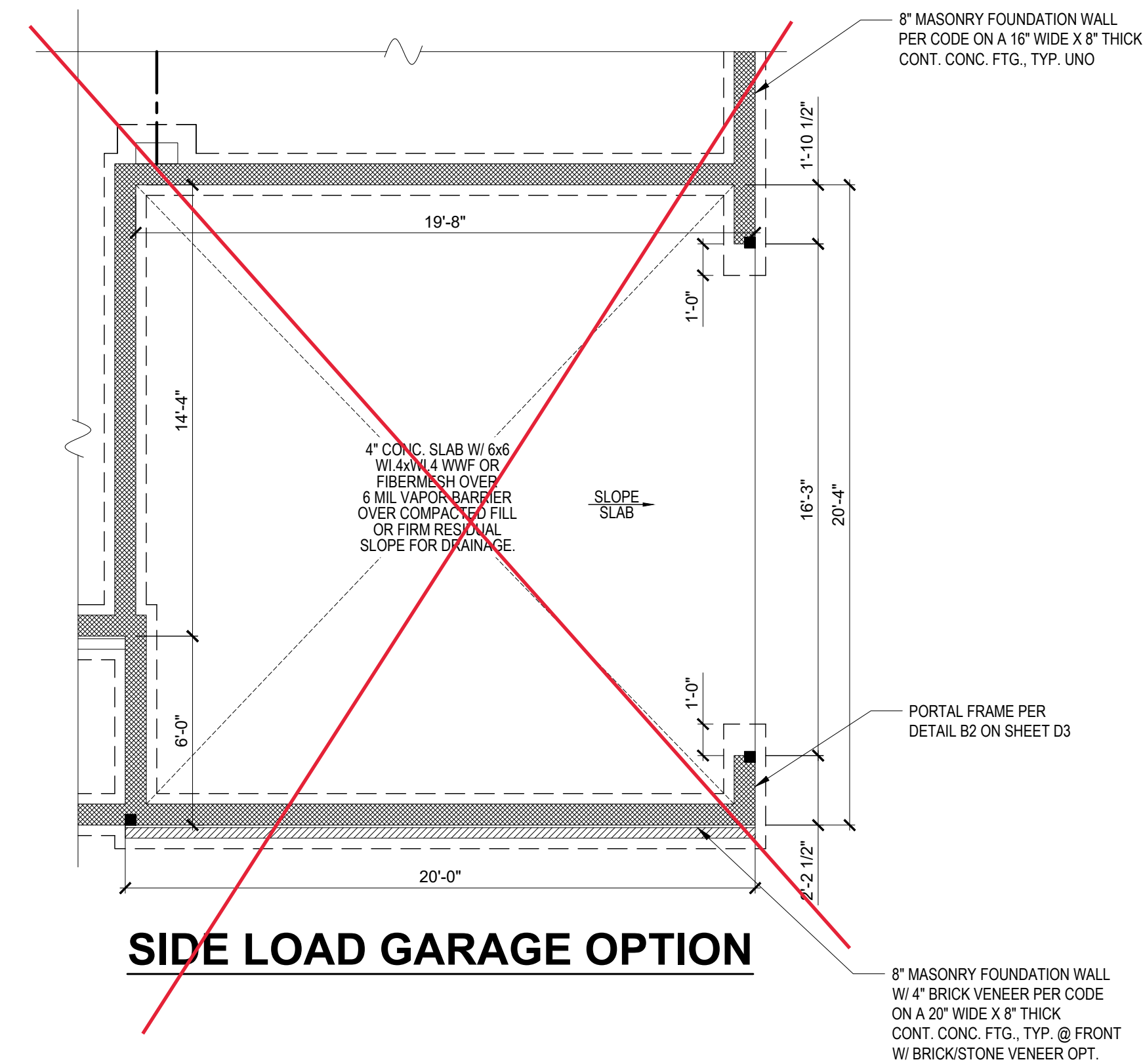
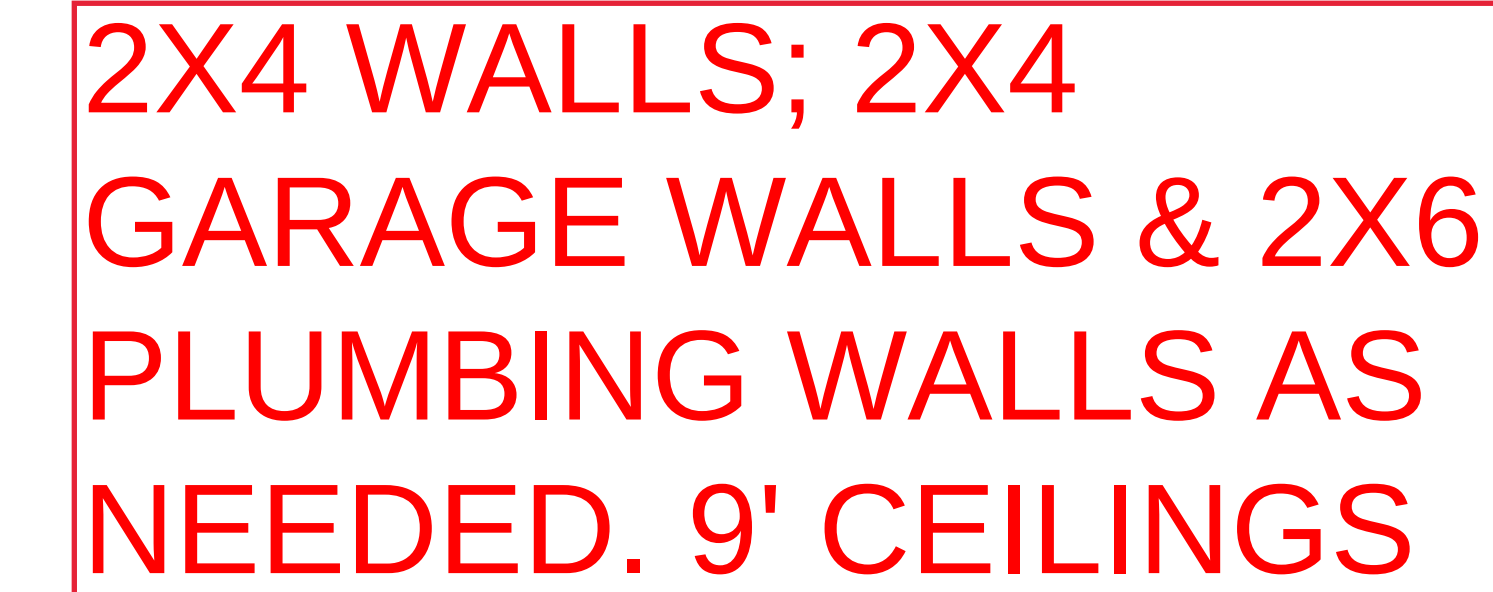
GARAGE OPTION

2x4 WALLS; 2X4
GARAGE WALLS &
2X6 PLUMBING
WALLS AS NEEDED. 9'
CEILINGS

2. DRB DESIGN assumes no liability for any home constructed from this plan.
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13. DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
FLOOR (primary)	40	10	L/360	L/240
FLOOR (secondary)	40	10	L/360	L/240
ATTIC (w/ storage)	20	10	L/240	L/180
ATTIC (no access)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 120 MPH (EXPOSURE B)			
SEISMIC	BASED ON SEISMIC ZONES A, B & C			

- 1 ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS
- 2 OF "NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE", IN
- 3 ADDITION TO ALL LOCAL CODES AND REGULATIONS.
- 4 ALL IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS
- 5 AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYPICAL
- 6 ENGINEERING & DESIGN, PA IS NOT RESPONSIBLE FOR DIMENSIONS
- 7 AND SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
- 8 ALL LUMBER SHALL BE SYP #2 (UNO)
- 9 ALL IS THE CONTRACTOR TO RESPOND TO EACH SINGLE MEMBER AND
- 10 Fb = 2000 PSI (OR GREATER)
- 11 (I.E. LIVE MICROLAM)
- 12 ALL LSL LUMBER IS TO BE 1.55E (Fb = 2325 PSI) (OR GREATER)
- 13 ALL LSL LUMBER IS TO BE 1.8E (Fb = 2400 PSI) (OR GREATER)
- 14 FOR DEAD BEARING EXTERIOR WINDOW HEADERS ARE TO BE (2) 2x10 W/
- 15 1/2" JACK STUD (U.N.O.) AND K-2 STUDS PER TABLE R602.7.5
- 16 AND TOGETHER W/ (2) 10d NAILS @ 8" O.C., PROVIDED THAT THE TOP OF
- 17 THE WINDOW HEIGHT IS 6", MINIMUM BOTTOM OF THE WINDOW HEIGHT
- 18 IS 1'-6", OTHERWISE REFER TO TABLES R602.1(1) AND R602.7(2).
- 19 ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (U.N.O.) REFER
- 20 TO TABLE R602.7(1) AND K-2 STUDS PER TABLE R602.7.5
- 21 FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS
- 22 (UNO)
- 23 REFER TO 2018 NC BUILDING CODE SECTION R602 FOR CONSTRUCTION
- 24 OF ALL WALLS OVER 10'-0" IN HEIGHT.
- 25 ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50
- 26 Fy = 50 KSI MIN, (UNO)
- 27 ALL EXTERIOR LUMBER TO BE #2 SYP PTT
- 28 ALL CONCRETE, f_c = 3000 PSI MIN.
- 29 PRESUMPTIVE BEARING CAPACITY = 2000 PSF
- 30 1/2" ANCHOR BOLTS SPACED AT MAXIMUM OF 6'-0" O.C. AND NOT MORE
- 31 THAN 1'-2" FROM THE CORNER. THERE SHALL BE MINIMUM (2) BOLTS
- 32 PER PLATE SECTION. ANCHOR BOLTS SHALL BE SPACED AT 3'-0" O.C.
- 33 FOR BASEMENTS. ANCHOR BOLTS SHALL EXTEND 7'-0" INTO CONCRETE OR
- 34 MASONRY.
- 35 PSL COLLUMS DESIGNED WITH MAX. HEIGHT OF 9'-0" (UNO)
- 36 PROVIDE A MINIMUM OF 500K LIFT & LATERAL CONNECTION AT TOP
- 37 AND BOTTOM OF PORCH COLLUMS. (U.N.O.)
- 38 PROVIDE CONTINUOUS SHEATHING PER SECTION 802.1.3 OF THE 2018
- 39 NCRC
- 40 MAXIMUM MASONRY PIER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS
- 41 LEAST HORIZONTAL DIMENSION.
- 42 UNLESS THE PIER IS 500R SHALL BE CONTINUOUSLY
- 43 ANCHORED TO THE FOUNDATION.
- 44 METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.



1330 SQ. FT. OF CRAWL SPACE / 150 = 8.87 SQ. FT. OF REQ'D VENTILATION WITHOUT CROSS VENTILATION
8.87 SQ. FT. OF VENTILATION REQ'D / 0.88 SQ.FT. PER VENT = 11.0 VENTS REQ'D (BASED ON 8" X 16" VENTS);

$$1330 \text{ SQ. FT. OF CRAWL SPACE} / 1500 = 0.89 \text{ SQ. FT. OF REQ'D VENTILATION WITH CROSS VENTILATION}$$

$$0.89 \text{ SQ. FT. OF VENTILATION REQ'D} / 0.88 \text{ SQ.FT. PER VENT} = 2.0 \text{ VENTS REQ'D (BASED ON 8" X 16" VENTS)}_2$$

- WALL VENTED CRAWL SPACES REQUIRE FULL COVERAGE GROUND VAPOR RETARDERS.

CRAWL SPACE VENTILATION CALCULATION

NO SCALE

TYNDALL
ENGINEERING & DESIGN, P.A.

250 Shipwreck Drive • Garner • North Carolina • 27539
T 919 778-3200 • F 919 778-1668
www.tyndallengineering.com

A&G RESIDENTIAL
916 ARSENAL AVE. SUITE B.
FAYETTEVILLE NC 28205

THE HAVILLAND

FOUNDATION PLAN CRAWL SPACE

Project #:
E E E 0 0 0 1 0 0 0 1

DRB2301-0091_0

Date: _____

02/01

Engineers

JA

DWC - Checked Box

PAT

Scale:

SEE PLAN

REVISION

<u>Date:</u>	<u>F</u>
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Sheet Num

S10

St

1-86

1816

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	L/240
FLOOR (primary)	40	10	L/360	L/240
FLOOR (secondary)	40	10	L/360	L/240
ATTIC (w/ storage)	20	10	L/360	L/180
ATTIC (no access)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 120 MPH (EXPOSURE B)			
SEISMIC	BASED ON SEISMIC ZONES A, B & C			

- 1) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF "NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE", IN ADDITION TO ALL LOCAL ORDINANCES AND REGULATIONS.
- 2) IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDAAL ENGINEERING & DESIGN, PA IS NOT RESPONSIBLE FOR DIMENSIONS AND SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
- 3) ALL LUMBER SHALL BE SYP #2 (UNO)
ALL OTHERS REFER TO 1751 (FOR ACTUAL) EACH SINGLE MEMBER AND
 $F_b = 2000 \text{ PSI}$, $E = 1.9M \text{ PSI}$ (OR GREATER)
(I.E. LVL, MICROLAM)
ALL LVL MEMBER IS TO BE 1.55E ($F_b = 2425 \text{ PSI}$) (OR GREATER)
ALL PLB LUMBER IS TO BE 1E ($F_b = 2400 \text{ PSI}$) (OR GREATER)
4) ALL LOAD BEARING EXTERIOR WINDOW HEADERS ARE TO BE (2) 2x10 W/ 1/2x4 JAC STUD (UNO) AND 2 STUDS PER TABLE R602.7.5 AND TOGETHER W/ (2) 1d NAILS @ 8" O.C. PROVIDED THAT THE TOP OF THE WINDOW HEIGHT IS 8"; MINIMUM BOTTOM OF THE WINDOW HEIGHT IS 1'-6". OTHERWISE REFER TO TABLES R602.7(1) AND R602.7(2).
- 5) ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (UNO) REFER TO TABLE R602.7(1) AND R602.7(2) FOR STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS (UNO)
- 6) REFER TO 2018 NC BUILDING CODE SECTION R602 FOR CONSTRUCTION OF ALL WALLS OVER 10'4" IN HEIGHT.
7) ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50
 $F_y = 50 \text{ KSI}$ MIN. (UNO)
8) ALL CONCRETE LUMBER TO BE SYP #2
ALL CONCRETE, $f_c = 3000 \text{ PSI}$ MIN.
9) PRESUMPTIVE BEARING CAPACITY = 2000 PSF
10) 1/2" ANCHOR BOLTS SPACED AT MAXIMUM OF 6" O.C. AND NOT MORE THAN 1/2" FROM THE MEMBER. THERE SHALL BE A MINIMUM OF (2) BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE SPACED AT 3'-0" O.C. FOR BASEMENTS. ANCHOR BOLTS SHALL EXTEND 7" INTO CONCRETE OR MASONRY.
11) PSLI COLUMNS DESIGNED WITH MAX. HEIGHT OF 9'-0" (UNO)
12) PROVIDE A MINIMUM OF 500K UPST & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS (UNO.)
13) PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.3 OF THE 2018 N.C.R.C.
14) MAXIMUM MASONRY PIER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
15) UP TO THE ROOF SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
16) METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.

1/4" = 1'-0" CEILING HGT. = 9'-0"

9'-1" TO 12'	4
12'-1" TO 15'	5

ROOF TRUSSES
PER MANUF.

ROOF SUPPORT

PORTAL FRAME PER
DETAIL B2 ON SHEET D3

BWL 2

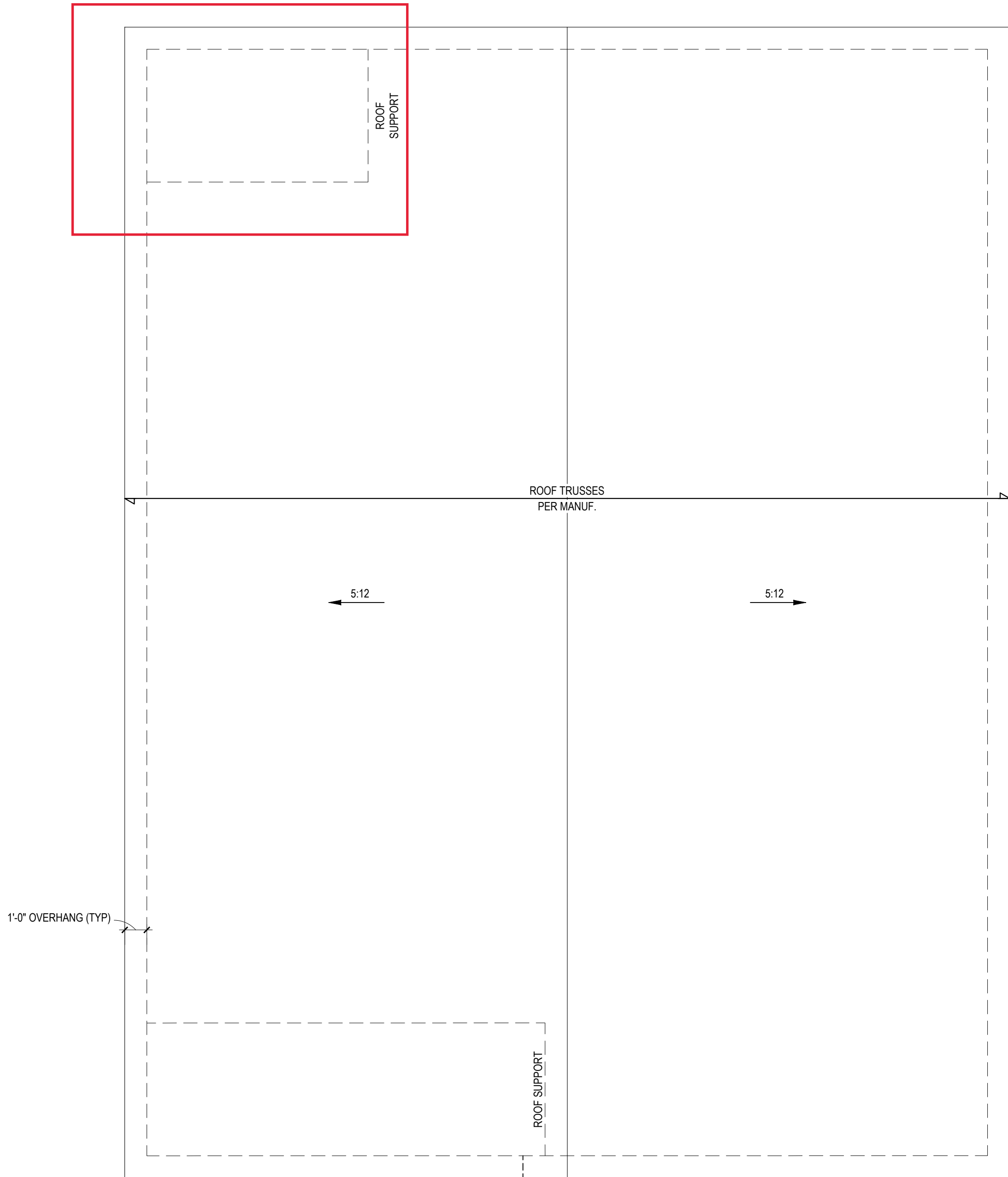
BWL B

GARAGE OPTION

1/4" = 1'-0"

FILENAME: Z:\RALEIGH OFFICE\DRB\DRB_2023\DRB2301-0091_A_G_RESIDENTIAL_HAVILLAND\CAD_FILES\DRB2301-0091_C_A_G_RESIDENTIAL_HAVILLAND\CAD_PLOT DATE:2/1/2024 1:19 PM

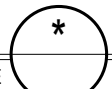
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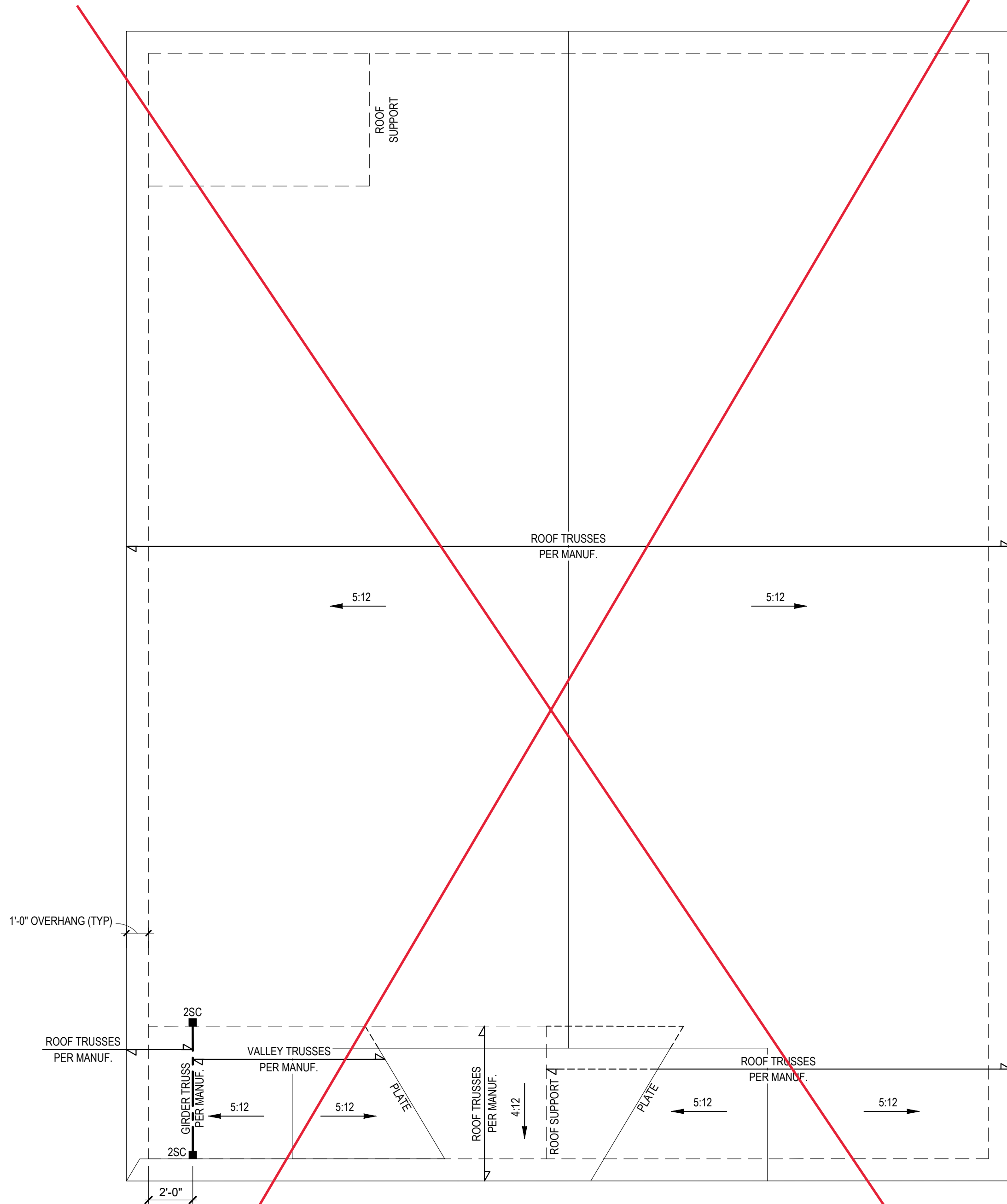
ROOF PLAN - ELEV~~A,B~~
1/4" = 1'-0"

1900 SQ. FT. OF ATTIC / 300 = 7 SQ. FT. INLETS/OUTLETS REQUIRED

- 1) CALCULATION BASED ON VENTILATORS USED AT LEAST 3'-0" ABOVE THE COMB VENTS WITH THE BALANCE OF VENTILATION PROVIDED BY GABLE VENTS.
- 2) CATHEDRAL CEILINGS SHALL HAVE A 1" MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE ROOF DECK AND THE INSULATION.

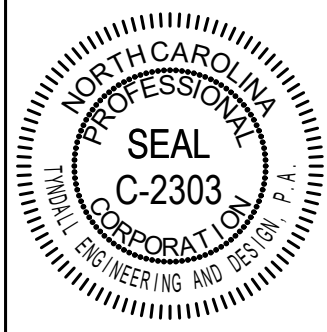
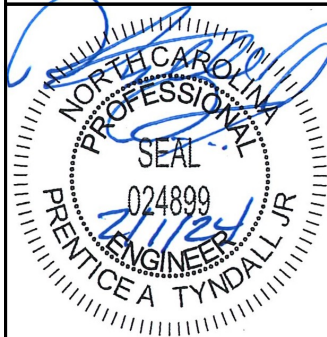
NO SCALE  ATTIC VENTILATION CALCULATION

2X4 WALLS; 2X4
GARAGE WALLS & 2X6
PLUMBING WALLS AS
NEEDED. 9' CEILINGS



ROOF PLAN - ELEV~~C,D~~
1/4" = 1'-0"

*Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precaution. Any deviation or discrepancies on plans are to be brought to the immediate attention of Tyn dall Engineering & Design, P.A. Failure to do so will void Tyn dall Engineering & Design, P.A. liability. *Please review these documents carefully. Tyn dall Engineering & Design, P.A. will interpret that all dimensions, recommendations, etc. presented in these documents were deemed acceptable once construction begins.



Client: **A&G RESIDENTIAL**
916 ARSENAL AVE. SUITE B.
FAYETTEVILLE, NC 28305

Plan: **THE HAVILLAND**

ROOF PLAN
ELEVS A, B, C, D

Project #: **DRB2301-0091_C**
Date: **02/01/2024**
Engineered By: **JA**
DWG. Checked By: **PAT**
Scale: **SEE PLAN**

REVISIONS		
No.	Date:	Remarks
		
		
		
		

Sheet Number

S3

1) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF "NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE", IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
ALL FLOORS	40	10	L/360	L/240
ATTIC (w/ walk up stairs)	30	10	L/360	L/240
ATTIC (pull down access)	20	10	L/240	L/180
ATTIC (no access)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF-TRUSS	20	20	L/240	L/180
WIND LOAD		BASED ON 120 MPH (EXPOSURE B)		
SEISMIC		SEISMIC ZONES A, B & C		

- | | | |
|--|--|---|
| | | <u>DEFINITIONS FOR COMMON ABBREVIATIONS</u> |
|--|--|---|

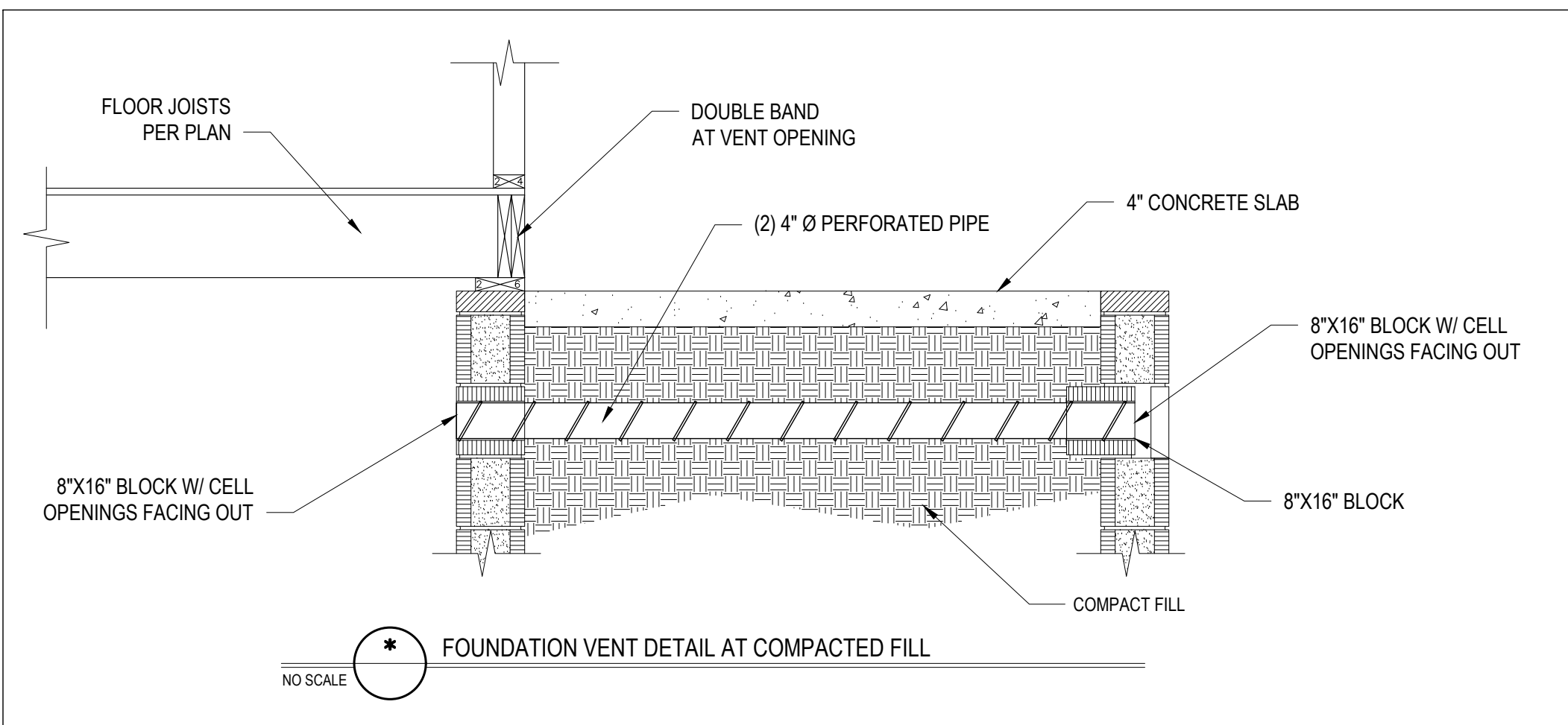
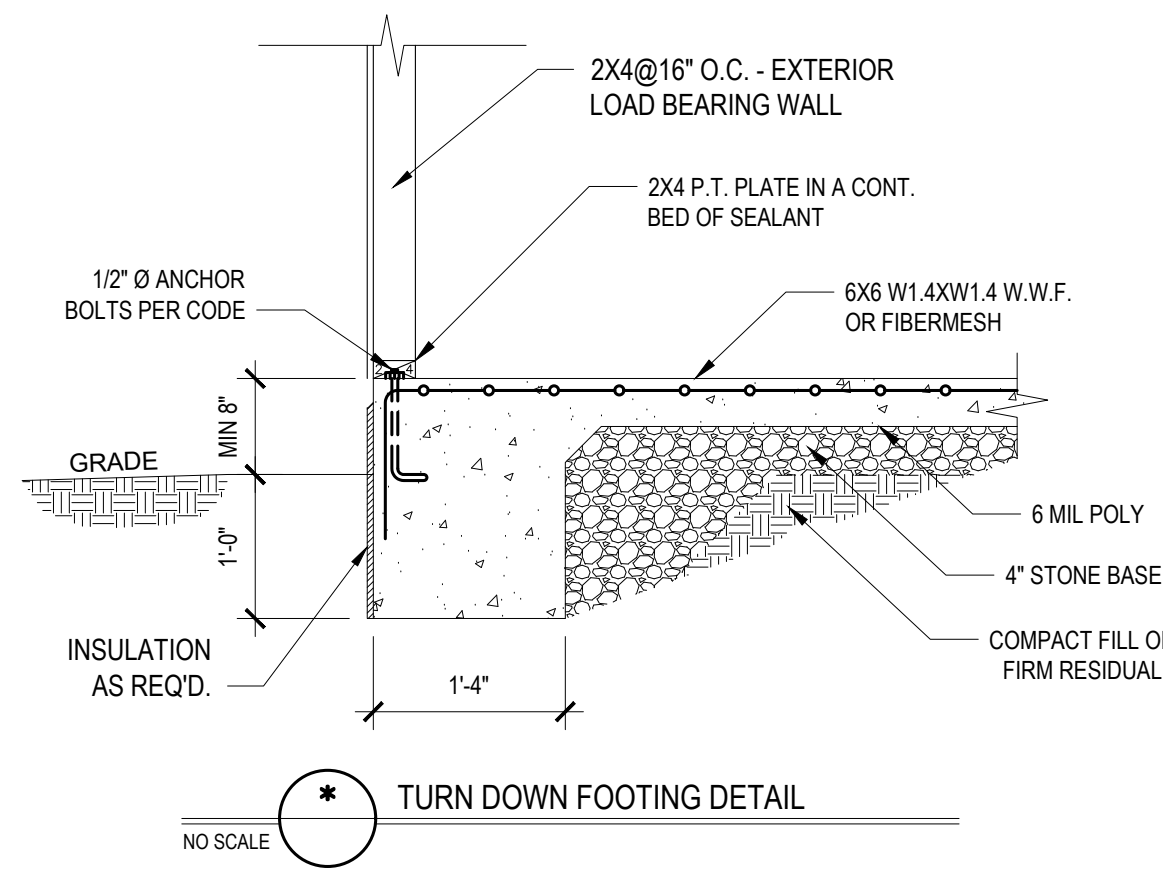
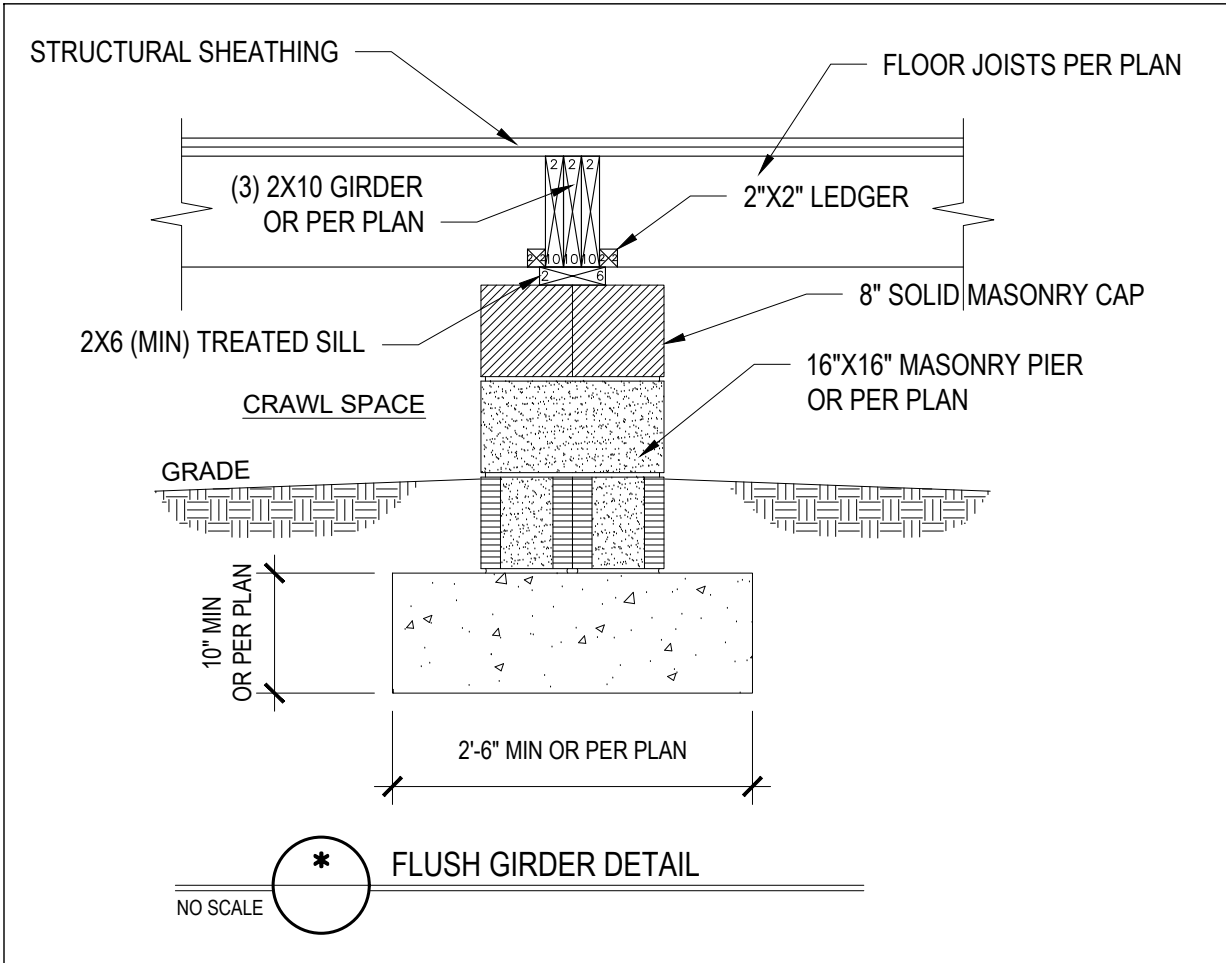
ALT	=	ALTERNATE	MAX	=	MAXIMUM
CANT	=	CANTLEVER	MIN	=	MINIMUM
CJ	=	CEILING JOIST	NOM	=	NOMINAL
CMU	=	CONCRETE MASONRY UNIT	O.C.	=	ON CENTER
COL	=	COLUMN	PL	=	POINT LOAD
CONC	=	CONCRETE	PT	=	PRESSURE TREATED
CONT	=	CONTINUOUS	REINF	=	REINFORCED
CT	=	COLLAR TIE	REQD	=	REQUIRED
DBL	=	DOUBLE	RJ	=	ROOF JOIST
DI	=	DIAMETER	RS	=	ROOF SUPPORT
DJ	=	DOUBLE JOIST	SC	=	STEEL COLUMN
DR	=	DOUBLE RAFTER	SCH	=	SCHEDULE
EA	=	EACH	SPEC	=	SPECIFIED
EE	=	EACH END	THK	=	THICK
FJ	=	FLOOR JOIST	TJ	=	TRIPLE JOIST
FND	=	FOUNDATION	TRTD	=	TREATED
FTTS	=	FOOTING	TRYP	=	TYPICAL
GALV	=	GALVANIZED	UNO	=	UNLESS NOTED OTHERWISE
HORIZ	=	HORIZONTAL	W	=	WIDE FLANGE BEAM
HT	=	HEIGHT	WWF	=	WELDED WIRE FABRIC
MANUF	=	MANUFACTURER	XJ	=	EXTRA JOIST

- | POST SIZE | MAX. POST HEIGHT** |
|-----------|--------------------|
| 4 x 4 | 8'-0" |
| 6 x 6 | 20'-0" |
| *** | OVER 20'-0" |

2) DECKS SHALL BE BRACED TO PROVIDE LATERAL STABILITY BY ONE OF THESE METHODS:

- | POST SIZE | MAX. TRIBUTARY AREA | MAX. POST HEIGHT | EMBEDMENT DEPTH | CONCRETE DIAMETER |
|-----------|---------------------|------------------|-----------------|-------------------|
| 4 x 4 | 48 SQ. FT. | 4'-0" | 2'-6" | 1'-0" |
| 6 x 6 | 120 SQ. FT. | 6'-0" | 3'-6" | 1'-8" |

-
- Diagram illustrating the cross-section of a dropped girder detail. The structure consists of the following components and dimensions:
- STRUCTURAL SHEATHING**: The top horizontal layer.
 - FLOOR JOISTS PER PLAN**: Located below the structural sheathing.
 - (3) 2X10 GIRDER OR PER PLAN**: Three girders supporting the floor joists.
 - 2X6 (MIN) TREATED SILL**: A sill plate supporting the girders.
 - OVERLAP JOISTS**: Joists overlapping the girders.
 - 8" SOLID MASONRY CAP**: A cap on top of the masonry pier.
 - 16"X16" MASONRY PIER OR PER PLAN**: A central masonry pier supporting the cap.
 - CRAWL SPACE**: The area below the masonry pier.
 - GRADE**: The ground level, indicated by a hatched line.
 - 10" MIN OR PER PLAN**: Dimension for the height of the masonry pier above grade.
 - 2'-6" MIN OR PER PLAN**: Dimension for the width of the masonry pier.
- DROPPED GIRDER DETAIL**
- NO SCALE



CLIMATE ZONES	FENESTRATION U-FACTOR ^{b,j}	SKYLIGHT U-FACTOR ^b	GLAZED FENESTRATION SHGC ^{b,k}	CEILING R-VALUE ^m	WOOD FRAMED WALL R-VALUE	MASS WALL R-VALUE ⁱ	FLOOR R-VALUE	BASEMENT WALL R-VALUE ^{c,d}	SLAB R-VALUE AND DEPTH ^g	CRAWL SPACE WALL R-VALUE ^c
3	0.35	0.55	0.30	38 or 30 cont	15 or 13 + 2.5 ^h	5/13 or 5/10 cont	19	5/13 ^f	0	5/13
4	0.35	0.55	0.30	38 or 30 cont	15 or 13 + 2.5 ^h	5/13 or 5/10 cont	19	10/15	10	10/15
5	0.35	0.55	NR	38 or 30 cont	19, or 13 + 5 or 15 + 3 ^h	13/17 or 13/12.5 cont	30 ^o	10/15	10	10/19

NO SCALE

8. R-VALUES ARE MINIMUMS. U-FACTORS AND SHGC ARE MAXIMUMS. WHEN INSULATION IS INSTALLED IN A CAVITY WHICH IS LESS THAN THE LABEL OR DESIGN THICKNESS OF THE INSULATION, THE INSTALLED R-VALUE OF THE INSULATION SHALL NOT BE LESS THAN THE R-VALUE SPECIFIED IN THE TABLE.

- b. THE PENETRATION U-FACTOR COLUMN EXCLUDED SYLTONS. THE SOLAR HEAT LOSS COEFFICIENT (SHGC) COLUMN APPLIES TO ALL GLAZED PENETRATIONS.
- c. "101% MEANS R-10 CONTINUOUS INSULATING SHEATHING ON THE INTERIOR OR EXTERIOR OF THE ROOF OR R-9 CAVITY INSULATION AT THE INTERIOR OF THE BASEMENT WALL OR GROUND SPACE WALL. FOR DOWNSLAB SLABS, INSULATION SHALL BE APPLIED FROM THE INSPECTION GAP DOWNWARD TO THE BOTTOM OF THE FOOTING OR A MAXIMUM OF 24" BELOW GRADE UNLESS OTHERWISE STATED. FOR PLATTING SLABS, INSULATION SHALL EXTEND TO THE BOTTOM OF THE FOUNDATION WALL OR 24" UNLESS OTHERWISE STATED. R-9 SHALL BE ADDED TO THE REQUIRED SLAB EDGE R-VALUES FOR HEATED SLABS.
- d. DELETED
- e. BASEMENT WALL INSULATION IS NOT REQUIRED IN WARM-HUMID LOCATIONS AS DEFINED BY FIGURE N1101.2 AND TABLE N1101.7.
- f. OR INSULATION SUFFICIENT TO FILL THE FRAMING CAVITY. R-19 MINIMUM.
- h. THE FIRST VALUE IS CAVITY INSULATION, THE SECOND VALUE IS CONTINUOUS INSULATION. 50 "13-5" MEANS R-13 CAVITY INSULATION PLUS R-5 INSULATED SHEATHING. "15-4" MEANS R-15 CAVITY INSULATION, PLUS R-4 INSULATED SHEATHING. IF STRUCTURAL SHEATHING COVERS 25% OR LESS OF THE EXTERIOR, INSULATING SHEATHINGS IS NOT REQUIRED WHERE THE STRUCTURAL SHEATHING IS EXISTING. IF STRUCTURAL SHEATHING COVERS MORE THAN 25 PERCENT OF THE EXTERIOR, SHALL BE SUPPLEMENTED WITH INSULATED SHEATHING OF AT LEAST R-2. "13-12" MEANS R-13 CAVITY INSULATION PLUS R-12 SHEATHING.
- i. FOR MASS WALLS, THE SECOND R-VALUE APPLIES WHEN MORE THAN HALF THE INSULATION IS ON THE INTERIOR MASS WALL.
1. IN ADDITION TO THE EXCEPTION IN SECTION N1103.3.3, A MINIMUM OF TWO GLAZED PENETRATION PRODUCT ASSEMBLIES HAVING A U-FACTOR NO GREATER THAN 0.30 SHALL BE PERMITTED TO BE SUBSTITUTED FOR MINIMUM CODE COMPLIANT PENETRATION PRODUCT ASSEMBLIES WITHOUT PENALTY.
2. IN ADDITION TO THE EXCEPTION IN SECTION N1103.3.3, A MINIMUM OF TWO GLAZED PENETRATION PRODUCT ASSEMBLIES HAVING A SHGC NO GREATER THAN 0.70 SHALL BE PERMITTED TO BE SUBSTITUTED FOR MINIMUM CODE COMPLIANT PENETRATION PRODUCT ASSEMBLIES WITHOUT PENALTY.
- h.30. SHALL BE DEFERRED TO THE MINIMUM INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE EAVES. OTHERWISE IS 3X INSULATION IS REQUIRED WHERE ADEQUATE CLEARANCE EXISTS OR INSULATION MUST EXTEND TO EITHER THE INSULATION Baffle OR WITHIN 1 INCH OF THE ATIC ROOF EDGE.
10. TABLE VALUE REQUIRED FOR ROOF EDGE WHERE THE SPACE IS LIMITED BY THE PITCH OF THE ROOF. THERE THE INSULATION MUST FILL THE SPACE UP TO THE RAFTER BLEED.
11. R-19 FIBERGLASS BATTING COMPRESSED AND INSTALLED IN A NOMINAL 2" FRAMING CAVITY IS DEEMED TO COMPLY. FIBERGLASS BATTING REQUIRED IN R-19 OR HIGHER COMPOSED AND INSTALLED IN A 2x4 WALL.
- d. BASEMENT WALL MEETING THE COMMISSION WALL SPECIFIC HEAT TREATMENT REQUIREMENT MAY USE THE MASS WALL R-VALUE AS THE MINIMUM REQUIREMENT.

A circular professional engineer seal for the State of North Carolina. The outer ring contains the text "NORTH CAROLINA" at the top and "PRENTICE A TYNDALL JR" at the bottom. Inside the ring, the words "PROFESSIONAL" and "ENGINEER" are written in a semi-circle. In the center, the license number "024899" is displayed. The seal is stamped in blue ink on a white background, with some handwritten blue ink scribbles over it.

TYNDALL
ENGINEERING & DESIGN, P.A.

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info@tyndalleng.com • North Carolina • 27829
www.tyndallengineering.com



A circular professional seal for the North Carolina Professional Engineer and Designer, P.A. The seal features the text "NORTH CAROLINA" at the top, "PROFESSIONAL" on the left, "SEAL" in the center, "C-2303" below "SEAL", "CORPORATION" on the right, and "ENGINEER AND DESIGNER, P.A." at the bottom. The seal is surrounded by a decorative border of small vertical lines.

**A&G RESIDENTIAL
916 ARSENAL AVE. SUITE B.**

THE HAVILLAND

STANDARD DETAILS

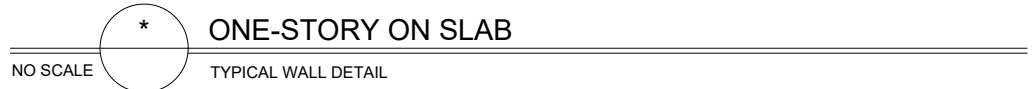
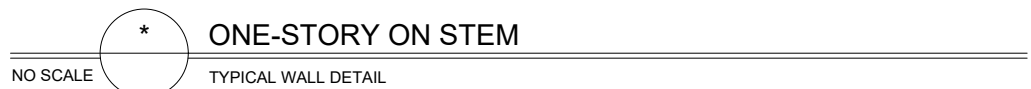
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<u>Date:</u> 02/01/2024
<u>Engineered By:</u> JA
<u>DWG. Checked By:</u> PAT
<u>Scale:</u> SEE PLAN

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No.	Date:	Remarks
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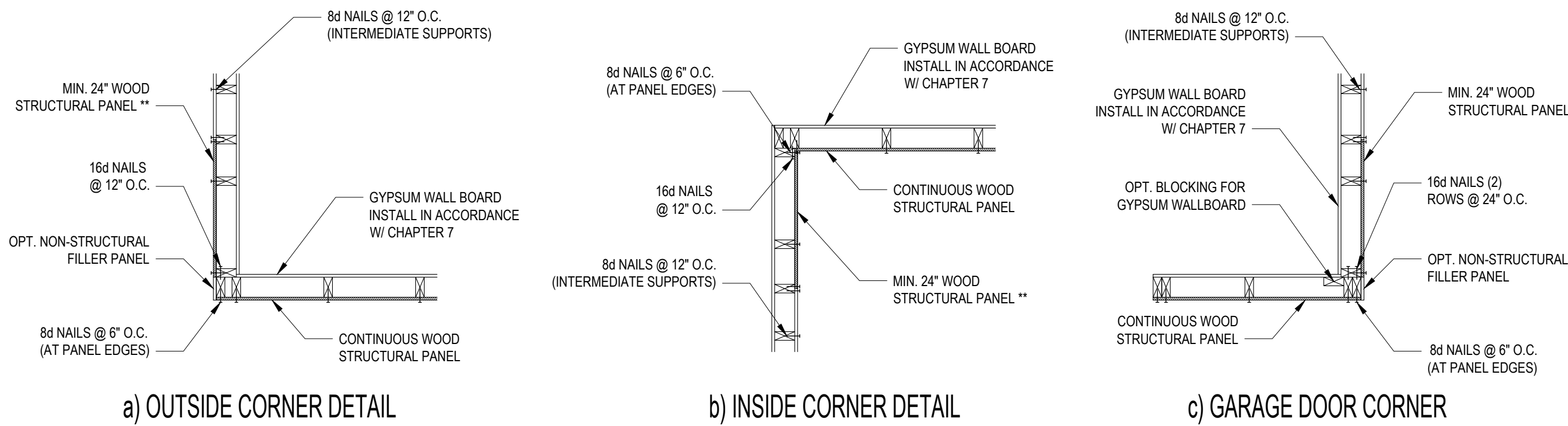
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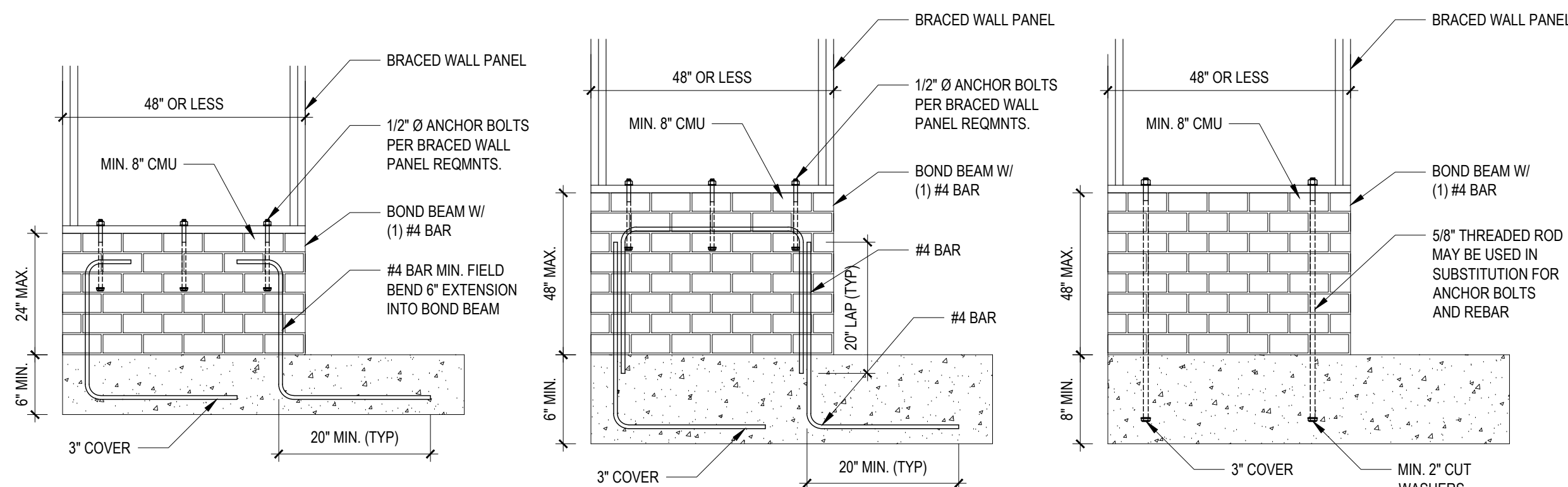
B1: TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING
NO SCALE

STRUCTURAL SHEATHING NOTES

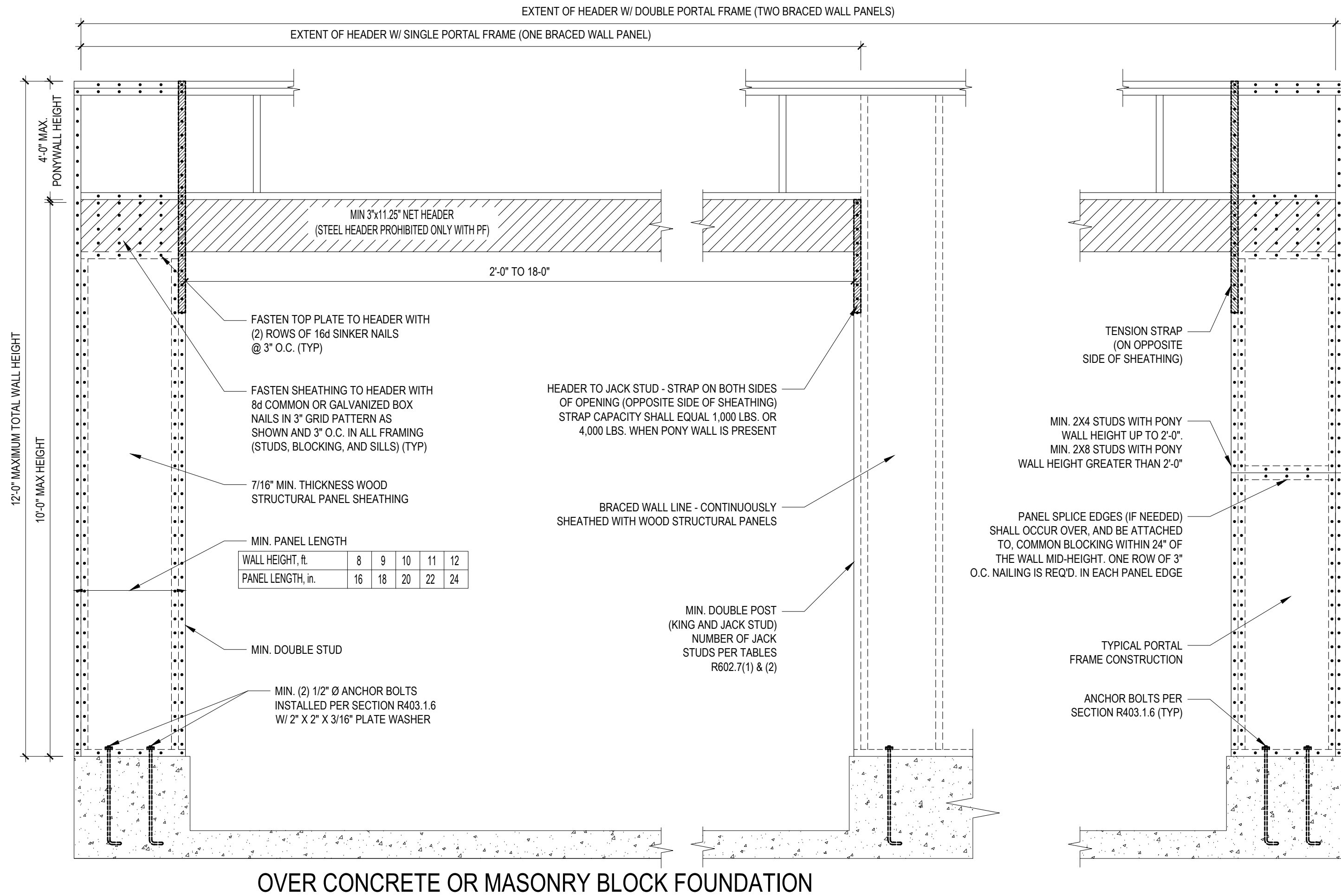
- DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 120 MPH OR LESS.
- WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10.1 OF THE 2018 NCRC.
- BRACING REQUIREMENTS SHALL BE PER TABLE R602.10.3. REFER TO SECTION R602.10.4 FOR LOAD PATH DETAILS INCLUDING CONNECTIONS & SUPPORT OF BRACED WALL PANELS.
(1) REFERENCE FIGURE R602.10.4.3 OF THE 2018 NCRC.
- INTERIOR BRACED WALL PANELS (BWP) INDICATED SHALL BE SHEATHED IN ACCORDANCE WITH THE GB METHOD OR WSP METHOD AS PRESCRIBED IN SECTION R602.10.1 (UNO)
(2) 1/2\"/>
- EXTERIOR BRACED WALL PANELS (BWP) SHALL BE CONSTRUCTED IN ACCORDANCE WITH CS-WSP METHOD AS PRESCRIBED IN SECTION R602.10.3 (UNO)
- ALL SHEATHABLE SURFACES OF EXTERIOR WALLS (INCLUDING AREAS ABOVE AND BELOW OPENINGS AND GABLE END WALLS) SHALL BE CONTINUOUSLY SHEATHED WITH WOOD STRUCTURAL PANEL (WSP) SHEATHING WITH A MINIMUM THICKNESS OF 3/8\"/>
- MINIMUM BRACED WALL PANEL LENGTHS WITH CS-WSP METHOD SHALL BE AS FOLLOWS:
24\"/>
- FOR CS-WSP METHOD, A MINIMUM 24\"/>

REQUIRED BRACED WALL PANEL CONNECTIONS				
METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION	
			@ PANEL EDGES	@ INTERMEDIATE SUPPORTS
CS-WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
GB	GYPSUM BOARD	1/2"	5d COOLER NAIL** @ 7" O.C.	5d COOLER NAIL** @ 7" O.C.
WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.

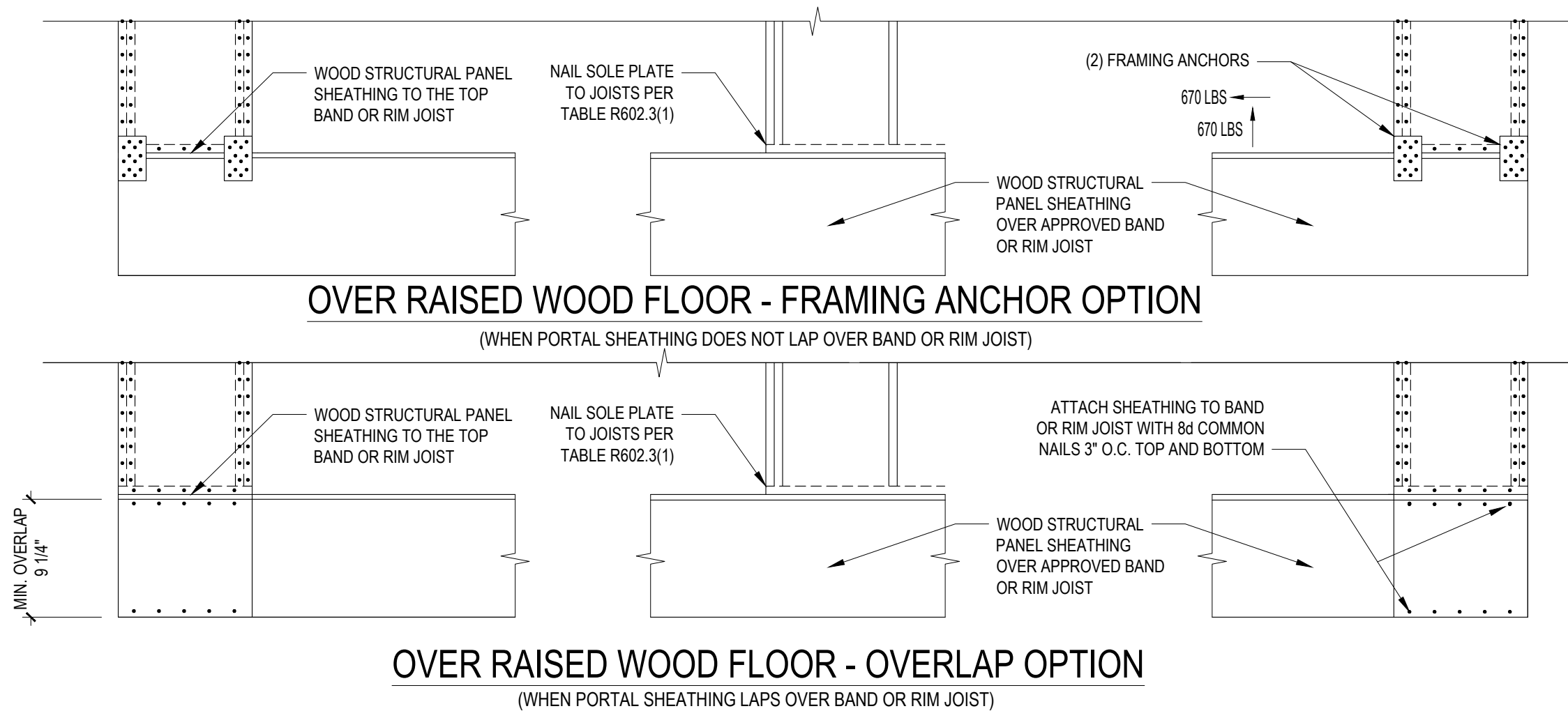
**OR EQUIVALENT PER TABLE R702.3.5
B3: BRACE WALL PANEL CONNECTIONS
NO SCALE



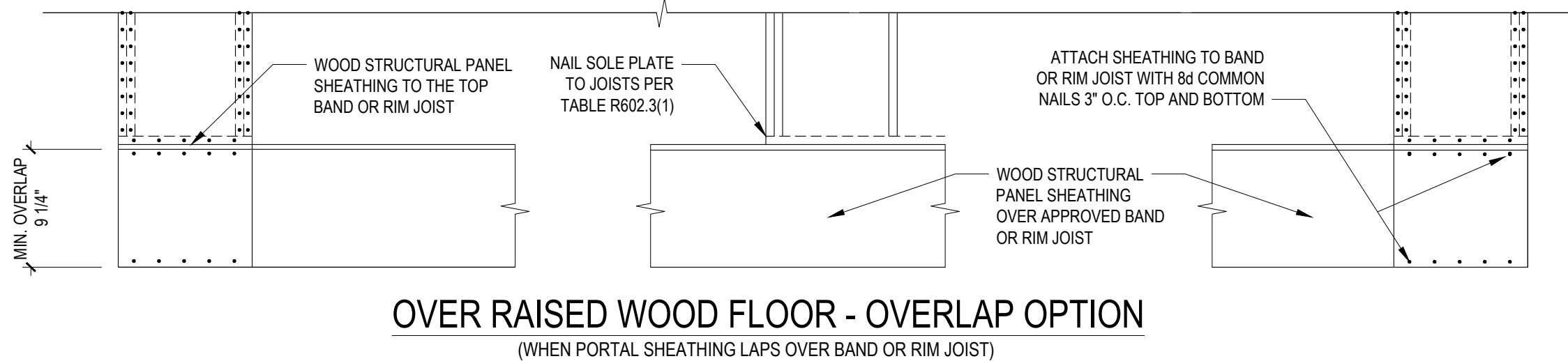
B4: MASONRY STEM WALL SUPPORTING BRACED WALL PANELS
FIGURE R602.10.4.3 OF THE 2018 NCRC
NOTE: GROUT BOND BEAMS AND ALL CELLS WHICH CONTAIN REBAR, THREADED RODS AND ANCHOR BOLTS



OVER CONCRETE OR MASONRY BLOCK FOUNDATION



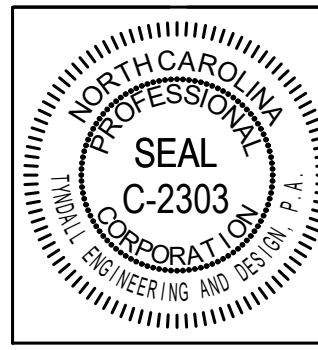
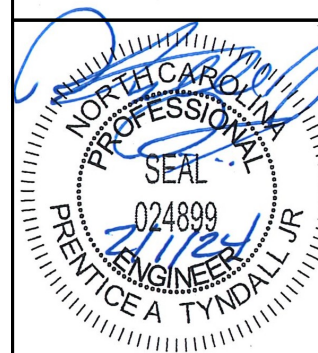
OVER RAISED WOOD FLOOR - FRAMING ANCHOR OPTION
(WHEN PORTAL SHEATHING DOES NOT LAP OVER BAND OR RIM JOIST)



OVER RAISED WOOD FLOOR - OVERLAP OPTION
(WHEN PORTAL SHEATHING LAPS OVER BAND OR RIM JOIST)

B2: METHOD PF: PORTAL FRAME CONSTRUCTION
FIGURE R602.10.1

*Engineers seal does not include construction means, methods, techniques, sequences, procedures or safety precaution.
Any deviation or discrepancies on plans are to be brought to the immediate attention of Tyndall Engineering & Design, P.A. Failure to do so will void Tyndall Engineering & Design, P.A. liability.
*Please review these documents carefully. Tyndall Engineering & Design, P.A. will interpret that all dimensions, recommendations, etc. presented in these documents were deemed acceptable once construction begins.



Client: **A&G RESIDENTIAL**
916 ARENAL AVE. SUITE B.
FAYETTEVILLE, NC 28305
Project: **THE HAVILLAND**

**SHEATHING
DETAILS**

Project #: **DRB2301-0091_C**
Date: **02/01/2024**
Engineered by: **JA**
DWG. Checked by: **PAT**
Scale: **SEE PLAN**

REVISIONS		
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